December 21, 1999

QUESTIONS AND ANSWERS FROM PART 75 IMPLEMENTATION CONFERENCE

October 18-19, 1999

General

Question 1: Are past Policy Manual updates still valid?

Answer: Yes, but only if the particular question is in the Revised Policy Manual. The Revised Policy Manual includes all old questions (including those distributed through updates) that are still valid for policy purposes. Most questions have been revised, so you should reread the answers and make certain the substance is unchanged.

Question 2: Is EPA planning on revising the Level 2 audit checklist which is included in the Acid Rain CEMS Field Audit Manual and used when conducting field audits?

Answer: Not at this time. For items that are not applicable following the Part 75 revisions, you may just put "N/A" on the form. You should make sure you are using the latest version of the form, available from the website. You may also alter the format if you choose.

Question 3: How do we know which changes at our unit trigger quality assurance tests?

Answer: EPA has drafted a list of the most common events that trigger a testing requirement. This list will be finalized and issued as policy guidance at a later date. Until then, contact EPA on a case-by-case basis if you have questions about which QA tests are required.

Question 4: This question is being revised.

Answer:

Question 5: My source is an OTC NBP-only source. Can we take advantage of some of the new Part 75 rule revisions?

Answer: You may only use the new Part 75 provisions if your State permits use of the revised rule. If you use any of the new provisions, you must meet all of the new Part 75 requirements -- you cannot select just certain parts of the new rule. Also, you may no longer use any monitoring or reporting option allowed by the January, 1997 NO_x Budget Program Guidance, if the option is not allowed under Part 75. Finally, you must upgrade to EDR v2.1.

Question 6: Is EPA considering allowing the use of PEMS?

Answer: EPA plans to work on PEMS in fiscal year 2000, if funding is available. The Agency has done some preliminary background work, but extensive field tests are needed to determine whether PEMS should be allowed to be used under the Acid Rain Program or Subpart H.

Question 7: I have a coal-fired unit with certified SO_2 and flow monitoring systems. The unit occasionally fires gaseous fuel. According to § 75.11(e)((3)(iii), the DAHS must automatically substitute a 2.0 ppm default for hours when: (a) the unit is combusting gaseous fuel that meets the definition of "very low sulfur fuel" in § 72.2; and (b) the measured SO_2 concentration reading is less than 2.0 ppm. Does EPA require me to demonstrate that my gaseous fuel qualifies as very low sulfur fuel before I use the 2.0 ppm default value?

Answer: No demonstration is required. The definition of very low sulfur fuel in 72.2 includes the following: "pipeline natural gas" (as defined in § 72.2), "natural gas" (as defined in § 72.2), and any other gaseous fuel which has 20 grains or less of total sulfur. If, based on a knowledge of the composition of the gaseous fuel being combusted (e.g., from contract specifications or historical fuel sampling information), you believe the fuel qualifies as very low sulfur fuel, report the 2.0 ppm default SO_2 concentration for gas-fired hours when the bias-adjusted SO_2 concentration is less than 2.0 ppm.

Question 8: During certain operating conditions (e.g., startup), a unit may not have any measurable load in megawatts or klb/hr of steam. This creates a problem in the reporting of unit heat input rates for common stacks and common pipe configurations, because the heat input rate measured at the common stack (or pipe) is apportioned to the individual units on the basis of unit load. If the unit load is zero, the heat input rate apportionment equation (Equation F-21a or F-21b) will assign an hourly heat input rate of zero to the unit, irrespective of whether the unit is combusting fuel. Reporting a positive unit operating time in RT 300/18 (indicating that the unit is combusting fuel) and a zero unit heat input rate in RT 300:36 generates an error message in the feedback report for my EDR submission. How can I avoid generating this error message and

ensure that a positive unit heat input rate is reported for all hours in which a positive unit operating time is reported?

Answer: You may define a minimum default unit load, which you would use during hours of zero unit load.

A default unit load of 1.0 MWe (or 1.0 klb/hr of steam, as applicable) is recommended. However if, for a particular hour, use of a 1.0 MWe (or 1.0 klb/hr of steam) default unit load value in Equation F-21a (or F-21b) still results (after rounding off) in a zero unit heat input rate, then, for that hour, use the smallest whole number value of unit load that gives a reportable unit heat input rate greater than zero.

Include in the QA plan for the facility the exact procedure used to determine unit heat input rate during unit operating hours where the unit load is zero. Manual substitution of the default unit load value and manual correction of the reported unit heat input rate is permissible for such hours.

Supporting Data for Flow RATAs

Question 9: For use of the default wall effects adjustment factor (WAF) values under Method 2H, do we have to do anything to qualify?

Answer: No, just report the default WAF value in EDR v2.1, and if you are using the 1% default value, declare that you have a brick or mortar stack.

Question 10: To use the 1% default wall effects adjustment factor (WAF) value in Method 2H, does the entire stack have to be brick or mortar or just the lining? What about gunite?

Answer: To use the 1% default WAF, just the lining of the stack must be brick or mortar. Gunite is not considered to be brick or mortar.

Question 11: What actions do I take after I subtract the 0.5% or 1.0% default wall effects adjustment factor (WAF) value in Method 2H?

Answer: Follow the guidelines in Question 3.13 in the Revised Acid Rain Program Policy Manual.

Question 12: What is the advantage of using the spherical probe for the new flow methods?

Answer: In low pitch angle applications, a spherical probe may be easier to read than a DA or DAT probe. This is likely to be less of a consideration, however, if an electronic manometer is used to read the pitch angle pressure, as recommended in Section 6.4 of Method 2F.

Question 13: If, under the new flow methods, we calibrate the probe in the wind tunnel at 60 and 90 fps, can we use it at any velocity?

Answer: When using a 3-D probe (i.e., DA, DAT, or spherical) either under Method 2F or in yaw-determination mode under Method 2G, you may use the probe at any average velocity greater than or equal to 20 fps if it has been calibrated at 60 and 90 fps. That is, a 3-D probe may not be used under Method 2F or 2G if the average velocity is less than 20 fps.

Under Method 2G, if you calibrate a Type S probe at 60 and 90 fps, you may use the probe at any average velocity greater than or equal to 30 fps. A Type S probe under Method 2G may be used at average velocities less than 30 fps, but only if one of the two velocity settings used when calibrating the probe is less than or equal to the average velocity encountered in the field. This must be verified in accordance with the procedures specified in section 12.4 of Method 2G. Also, the QA/QC requirements in Sections 10.6.12 through 10.6.14 of Method 2G for calibration coefficients must be met at the chosen calibration velocity settings.

Question 14: If we use a 3D probe for Method 2F, must we use a 3D probe for the WAF measurements under Method 2H?

Answer: Yes, you must use the same type of probe.

Question 15: Are there any plans to expand the use of the WAF to square and rectangular stacks? Why can't we just use a default value?

Answer: EPA will look at this if budget resources allow. A default WAF value may not be used until the effects near the wall in a square or rectangular stack have been properly studied by EPA.

Question 16: How many Method 1 traverse points must we use when a calculated wall effects adjustment factor (WAF) is determined using Method 2H?

Answer: You must perform a Method 1 velocity traverse of a least 16 points for each run used in the calculation of the WAF.

Question 17: Under the new flow methods, what if a source finds that it is getting a calculated wall effects adjustment factor (WAF) less than 0.9700 (i.e., more than a 3% reduction in the velocity calculated without Method 2H)? Can you do more than 16 Method 1 traverse points and use a WAF value of less than 0.9700?

Answer: You can use more than 16 Method 1 traverse points when a Method 2H calculated WAF is used. However, no matter how many Method 1 traverse points are used, you cannot apply a calculated WAF that is less than 0.9700 for a complete wall effects traverse or 0.9800 for a partial wall effects traverse to the runs of a flow RATA.

It should be noted, however, that the actual calculated value of the WAF should be reported in column 109 of Record Type 614. (As noted in a Q&A previously posted on our web site, the instructions for RT 614, column 109, in this regard, are incorrect, and EPA will make corrections in the next scheduled update of the EDR Version 2.1 Reporting Instructions.)

For example, suppose that for a particular RATA run, you calculate a WAF of 0.9600, based on a complete wall effects traverse. You would report this measured WAF in column 109 of RT 614. However, you could not apply the WAF of 0.9600 to the runs of the RATA, because when a complete wall effects traverse is performed, the lowest WAF that you are allowed to use is 0.9700. Report the actual WAF applied to the RATA runs (in this case, 0.9700) in column 115 of RT 614.

Also see Q&A 3.15 in the Policy Manual.

Question 18: Isn't the wall effects adjustment factor (WAF) derived in Method 2H within the error band of Method 2?

Answer: By applying the WAF allowed by Method 2H, you are reducing potential systematic error that may result under Method 2 if velocity decay at the wall is not taken into account. The error band about the mean measured stack gas velocity characterizes the random error in Method 2 and is unrelated to the systematic error addressed by the WAF.

Span, Calibration, and Linearity

Question 19: For the annual span and range evaluation requirements, is it sufficient to just do the evaluation, or do we actually have to change the span and range?

Answer: As stated in Appendix A, Sections 2.1.1.5, 2.1.2.5 and 2.1.4.3, you must perform an annual evaluation to determine if the majority of the data fall between 20% and 80% of the range of the instrument. If you do not meet this requirement, the span and range must be changed (see paragraph (a) in each of the sections cited above). Note that you should use only measured data, not substitute data, for the determination.

Question 20: What must I do to comply with the provisions of Sections 2.1.1.5, 2.1.2.5 and 2.1.4.3 in Appendix A of Part 75, which require an annual evaluation of the span and range of my continuous emission monitors? Are there any other times at which span and range evaluations would be required?

Answer: To comply with the annual span and range evaluation provisions of Part 75, you must examine your historical CEMS data at least once per year, to see if the current span and range values meet the guideline in Section 2.1 in Appendix A. According to that guideline, the full-scale range of a monitor must be selected so that data recorded during normal operation are kept, to the extent practicable, between 20.0 and 80.0% of full-scale. Section 2.1 also describes several allowable exceptions to the "20-to-80 percent of range" criterion.

The annual span and range evaluation may be done in any quarter of the year. At a minimum, the evaluation consists of examining all CEMS data from the previous four calendar quarters, for each pollutant or parameter (i.e., SO_2 concentration, NO_x concentration, CO_2 concentration, and flow rate). You may also include data recorded in the quarter of the evaluation. For example, if the data analysis is performed in the fourth quarter of the year, the analysis must include all data from the 4th quarter of previous year through the 3rd quarter of the current year, and may (at the discretion of the owner or operator) include additional data from the 4th quarter of the current year.

Determine the percentage of the data that fall between 20.0 and 80.0% of full-scale and the percentage of the data that fall outside this range. The introductory text to Sections 2.1.1.5, 2.1.2.5, and 2.1.4.3 of Appendix A makes it clear that data recorded during short-term, non-representative operating conditions (such as a trial burn of a different fuel) should be excluded from the data analysis. If the majority (>50%) of the historical data are found to be within the 20.0 to 80.0% band, the current span and range values are acceptable and may continue to be used.

The results of annual span and range evaluations must be kept on-site, in a format suitable for inspection (see introductory text to Sections 2.1.1.5, 2.1.2.5, and 2.1.4.3 of Appendix A). Do not send these results to EPA.

If, for any pollutant or parameter, the results of the annual span and range evaluation fail to meet the guideline in Section 2.1 of Appendix A, Sections 2.1.1.5(a), 2.1.2.5(a), and 2.1.4.3(a) of Appendix A require the span and range to be adjusted. When span and range adjustments are required, the owner or operator has up to 45 days after the end of the end of the quarter in which the need to adjust the span is identified (in this case, the quarter of the span and range evaluation) to implement the change, with one exception—for span and range changes to a gas monitor that require new calibration gases to be purchased because the current calibration gases are unsuitable for use with the new span value, the owner or operator has up to 90 days after the end of the quarter of the unsatisfactory span and range evaluation to implement the span and range changes.

In addition to the annual evaluations, span and range evaluations may also be required made whenever the owner or operator plans to change the manner of operation of the affected unit(s), such that the emissions or flow rates may change significantly (see Sections 2.1.1.5(a), 2.1.2.5(a), and 2.1.4.3 of Appendix A). For example, installation of emission controls may require certain monitors to be re-spanned and re-ranged. The owner or operator should plan any span and range changes needed to account for such changes in unit operation, so that they are made in as timely a manner as practicable to coordinate with the operational changes.

Question 21: If we use the new provision allowing the use of mid-level calibration gas, do we have to get preapproval?

Answer: No, preapproval is not required.

Relative Accuracy

Question 22: How does the change to the flow RATA performance specification affect out-of-control status? If I pass semiannual flow RATAs at 12% in April and October of 1999, is the monitor out-of-control as of January 1, 2000 when the 10% specification takes effect?

Answer: No. If you tested and met the 15% standard in place in 1999, then the flow monitor would not be out-of-control. If you fail to meet the new 10% standard in a RATA performed on or after January 1, 2000 the flow monitor would be out-of-control.

Question 23: If I usually do RATA testing in the second quarter but one year I use the grace period and do the RATA in the third quarter, should I do the next RATA in the second or third quarter the following year? (The unit

operates more than 168 hours each quarter and the RATA results allow an "annual" frequency.)

Answer: You should do the next RATA in the second quarter (see Appendix B, Section 2.3.3(c)). The grace period cannot be used to extend the deadline for the next required QA test.

DAHS, Recordkeeping, and Reporting

Question 24: When will ETS be able to accept submissions in EDR v2.1?

Answer: ETS will accept EDR v2.1 submissions beginning in the first quarter 2000 -- so submissions after April 1, 2000 may be in EDR v2.1. For the first quarter in 2000, EDR v1.3 formats will also be acceptable.

Question 25: Now that we will be submitting monitoring plans electronically to States and Regions, must we still keep a hardcopy on site?

Answer: A complete monitoring plan should be available on site for inspection purposes. As long as the plan can be printed out during an inspection, it may be stored electronically (see § 75.53(e)). The Monitoring Plan Checking (MDC) software, which is available from the Acid Rain Program web site, may be used to print out the monitoring plan. If schematics or other parts of the plan are not available electronically, they should be kept on site in hardcopy.

Question 26: For the use of like kind replacement (LK) monitors -- can I list the LK monitor in RT 510 every quarter instead of just the quarters I use it?

Answer: Yes.

Question 27: Must our DAHS upgrade be complete on April 1, 2000 or may we change over during the second quarter?

Answer: Beginning on April 1, 2000, you must be able to collect all of the required information under EDR v2.1. You must also be able to generate a quarterly report in EDR v2.1 format no later than July 30, 2000. All of the data in each electronic quarterly report must be in the same EDR version. Consequently, EDR version upgrades in the middle of a calendar quarter are prohibited.

Question 28: Can we use the provisions for like-kind replacement monitors and the LK designation in an EDR v1.3 submission?

Answer: Yes.

Question 29: Regarding the historical load analysis under Appendix A, Section 6.5.2.1, does the phrase "past four operating quarters" refer to quarter boundaries only? Could we perform the analysis during the middle of a quarter and use data from the calendar year prior to the date?

Answer: You may use either values from the four quarters prior to the current quarter, or a previous year (365 days) approach.

Question 30: Assume I upgraded to EDR v2.1 on February 1, 2000. When do I start reporting data availability -- January 1, 2000 or February 1, 2000?

Answer: You may not upgrade to EDR v2.1 in the middle of a calendar quarter. All of the data in each electronic quarterly report must be in the same EDR version. If your software vendor completes development of EDR v2.1 software in February, 2000, you must wait until the second quarter of 2000 to begin reporting in v2.1.

Question 31: What are the DAHS verification requirements for upgrading from EDR v1.3 to v2.1 ?

Answer: A. Both formula verification and missing data routine verification are required. The minimum requirements are as follows:

(1) Emission and heat input rate formulas must be verified at each unit or stack location. The results of these checks must be kept on-site in a format suitable for inspection.

(2) Missing data routines may be verified either:

(i) By performing tests (e.g., a v2.1 equivalent of DCAS)at each location where the software is installed. If the developer of the software is able to perform this testing for customers via network, rather than by visiting each individual site, this is acceptable; or

(ii) By installing a standard software package which has been thoroughly tested by the developer for conformance with the Part 75 missing data algorithms.

If Option (ii) above is chosen, the following additional requirements apply:

(A) The missing data software must be installed at each location using the same type of operating system on which the software was tested by the developer; and

(B) The developer must provide an official statement to each user (e.g., a certificate or a letter from the appropriate

corporate official) certifying that the missing data software meets the requirements of Part 75.

(C) Each user of the software must add a provision to the QA plan for the monitoring systems (if such a provision is not already in place) to examine the values substituted by the DAHS during missing data periods for "reasonableness" (e.g., do the substituted values appear to be correct in view of the percent monitor data availability (PMA) and the length of the missing data period; do the substitute NO_x and flow rate values change when the load range changes during a missing data period; are maximum potential values substituted when the PMA drops below 80.0%, etc. The QA plan must include a corrective action provision to resolve any problems encountered with the missing data routines expeditiously. If correction of erroneous substitute data is found to have a "significant" impact on the reported quarterly emissions or heat input (as defined in the EPA data closure policy), resubmittal of the affected quarterly report(s) is required.

For both Options (i) and (ii), documentation of the tests performed to verify the missing data routines and the test results must kept on-site in a format suitable for inspection.

(3) In the electronic quarterly report for the quarter in which you upgrade to EDR v2.1, you must include the following certification statements (as applicable):

I certify that the automated Data Acquisition and Handling System (DAHS) component of each CEM system was tested and that proper computation of hourly averages for SO_2, NO_x, CO_2, and heat input rate for each formula submitted in the monitoring plan, according to the requirements of 40 CFR Part 75, was verified.

I certify that the automated Data Acquisition and Handling System (DAHS) component of each CEM system was tested and that proper computation of the missing data substitution procedures was verified according to 40 CFR Part 75.

I certify that the automated data acquisition and handling system (DAHS) component of each Appendix D system was tested, and that the DAHS correctly identifies any data that is generated using the missing data routines. In addition, I believe that the DAHS performs missing data substitution procedures set forth in Appendix D of Part 75 and clarified by EPA guidance.

I certify that the automated data acquisition and handling system (DAHS) component of the Appendix E system was tested, and that the DAHS correctly identifies any data that is generated using the missing data routines. In addition, I

believe that the DAHS performs missing data substitution procedures set forth in Appendix E of Part 75 and clarified by EPA guidance.

Low Mass Emitters

Question 32: Can I use the LME methodology for a unit that comes on-line in the middle of a year?

Answer: Yes, provided that you begin using LME when you startup. The main requirement is that you must use the LME methodology to account for all emissions during a year, so it is acceptable to use it starting in the middle of a year if the unit didn't operate until then. If your unit is operating on January 1, you must start using LME then or wait until the next year.

Missing Data

Question 33: For CO_2 and heat input missing data, when do I start reporting diluent monitor data availability on an hourly basis -- with the hour I do the EDR v2.1 upgrade?

Answer: This is covered in §§ 75.35 and 75.36. In the case where an existing, certified diluent monitor is in place, when you implement the new missing data algorithms for CO_2 or O_2 (as applicable) you must perform the initial missing data procedures of § 75.31(b) for the first 720 quality assured monitor operating hours, and then switch to the standard missing data procedures in § 75.35(d) or § 75.36(d), as applicable. Monitor data availability calculation and reporting begins when you begin using the standard missing data procedures.

The new CO_2 and heat input missing data algorithms may be implemented beginning on January 1, 2000 and must be implemented no later than April 1, 2000. The first operating hour of the quarter in which you first report data in EDR v2.1 is the proper point at which to start using the initial missing data procedures of § 75.31(b). Note that you may upgrade to EDR v2.1 only at the beginning of a calendar quarter, not in the middle of a quarter.

Question 34: When I upgrade to EDR v2.1, should I reset the missing data clock and the percent monitor data availability (PMA) and begin using the initial missing data procedures in § 75.31?

Answer: It depends on the parameter. Use the initial missing data procedures of § 75.31 only for parameters such as CO_2 and moisture, for which hourly reporting of PMA was not required in the past, but now is required under the May 26, 1999 revisions to Part 75. However, for SO_2, NO_x, and

flow rate, maintain the connection with the historical data streams when you switch to EDR v2.1 (i.e., do not reset the missing data clock or the PMA).